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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,688	04/14/2004	Jun Horikoshi	03500.018080	5377

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EXAMINER
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ROYER, WILLIAM J

ART UNIT	PAPER NUMBER
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2852

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/823,688

Applicant(s)

HORIKOSHI ET AL.

Examiner

William J. Royer

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*[Signature]*

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-16 is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☒ Claim(s) 2,3 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 05172004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

***Drawings***

The drawings are objected to because of the following informalities:

Figures 3, 4, 5A and 5B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

In Figure 4, delete reference numeral "14" and its corresponding lead line because reference numeral "14" is used to identify a sensor in the specification and other figures and no sensor appears in Figure 4.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The disclosure is objected to because of the following informalities:

On page 2, line 27, after "knobs" insert --- 1 ---.

On page 2, line 27, change "1" to --- 15 ---.

On page 3, lines 2, 12, 24 and 26, after "bottles" insert --- 15 ---.

On page 3, line 4, after "member" insert --- 51 ---.

On page 3, line 20, change "He" to --- The user ---.

On page 3, line 19, delete --- portion ---.

On page 3, line 22, change "he" to --- the user ---.

On page 3, line 25, after "opening" insert --- 12 ---.

On page 4, line 5, after "bottles" insert --- 15 ---.

On page 4, line 6, change "bottle" to --- toner bottle 15 ---.

On page 4, lines 8, 11, 14 and 15, after "bottle" insert --- 15 ---.

On page 4, line 9, after "opening" insert --- 12 ---.

On page 4, line 10, delete --- portion ---.

On page 4, line 20, after "body" insert --- 11 ---.

On page 4, line 22, after "sensor" insert --- S ---.

On page 5, line 4, after "bottle" insert --- 15 ---.

On page 5, line 23, change "bottle" to --- toner bottle 15 ---.

On page 6, line 18, after "sensor" insert --- S ---.

On page 6, line 19, after "body" insert --- 11 ---.

On page 6, line 23, after "member" insert --- 51 ---.

On page 7, lines 5 and 26, after "bottle" insert --- 15 ---.

On page 8, lines 18 and 21, change "bottle" to --- toner bottle 15 ---.

On page 9, line 12, change "he becomes" to --- the user becomes ---.

On page 9, line 12, change "he has" to --- they have ---.

On page 9, line 5, change "He has" to --- The user has ---.

On page 9, line 19, after "bottle" insert --- 15 ---.

On page 10, lines 5, 10, 18 and 22, after "bottle" insert --- 15 ---.

On page 10, line 14, change "bottle" to --- toner bottle 15 ---.

On page 13, line 12, delete --- 15 ---.

On page 13, line 27, after "bottle" insert --- 15 ---.

On page 14, line 22, after "door" insert --- 13 ---.

On page 16, line 3, after "knob" insert --- 1 ---.

On page 16, line 26, after "bottle" insert --- 15 ---.

On page 17, line 1, after "portions" insert --- 1A and 3A ---.

On page 17, line 5, after "bottle" insert --- 15 ---.

On page 17, lines 7, 9, 12, 13 and 16, reference numeral "100C" is used to identify a gear, however, reference numeral "100C" does not appear to be shown in any of the figures.

On page 17, line 12, change "B" to --- 100B ---.

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On page 17, line 24, after "knob" insert --- 1 ---.

On page 18, line 7, after "bottle" insert --- 15 ---.

On page 18, line 22, after "shutter" insert --- 3 ---.

On page 19, line 4, delete --- optical ---.

On page 19, lines 13, 19, 20 and 24, after "bottle" insert --- 15 ---.

On page 19, lines 17 and 24, after "door" insert --- 13 ---.

On page 20, line 24, after "toner" insert --- to ---.

On page 21, line 3, after "opening" insert --- 12 ---.

On page 21, lines 5 and 13, after "sensor" insert --- 14 ---.

On page 21, line 6, after "door" insert --- 13 ---.

On page 21, line 14, change "with the" to --- with ---.

On page 21, line 18, after "surface" insert --- 1b ---.

On page 21, line 25, after "bottle" insert --- 15 ---.

On page 23, line 7, change "bottle" to --- toner bottle 15 ---.

On page 24, line 2, after "bottle" insert --- 15 ---.

On page 24, line 4, change "bottle" to --- toner bottle 15 ---.

On page 24, line 19, after "door" insert --- 13 ---.

On page 26, line 2, change "/" to --- and ---.

On page 26, lines 11 and 20, after "sensor" insert --- 14 ---.

On page 26, lines 12 and 16, after each occurrence of "surface" insert --- 1b ---.

On page 26, line 13, after "knob" insert --- 1 ---.

On page 26, lines 18, 23 and 25, after "door" insert --- 13 ---.

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On page 26, line 21, after "bottle" insert --- 15 ---.

On page 27, line 3, after "bottle" insert --- 15 ---.

On page 27, lines 4, 7, 11 and 25, after each occurrence of "surface" insert --- 1b ---.

On page 27, lines 4, 15 and 26, after "knob" insert --- 1 ---.

On page 27, lines 6, 9 and 17, change "bottle" to --- toner bottle 15 ---.

On page 27, line 7, change "he" to --- they ---.

On page 27, line 8, change "performs" to --- perform ---.

On page 27, lines 14 and 22, after "sensor" insert --- 14 ---.

On page 27, lines 16 and 21, after "shutter" insert --- 3 ---.

On page 28, lines 1, 8 and 15, after "sensor" insert --- 14 ---.

On page 28, line 6, after "shutter" insert --- 3 ---.

On page 28, lines 7 and 10, after "bottle" insert --- 15 ---.

On page 28, line 14, after "door" insert --- 13 ---.

On page 33, line 2, change "By the" to --- By a ---.

On page 33, line 2, change "detecting the" to --- detecting a ---.

On page 33, line 3, change "the knob" to --- a knob ---.

On page 33, line 10, change "closing of the" to --- closing of a ---.

Appropriate correction is required.

### ***Claim Objections***

Claim 13 is objected to because of the following informalities:

Claim 13, line 3, change "to the" to --- to a ---.

Claim 13, line 4, change "the shutter" to --- a shutter ---.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuchi.



Referring to Figures 1-4, Fukuchi discloses a toner supply device 30 loaded with a removable toner cartridge 32 (i.e., toner supplying container) for supplying toner to a developing unit of an electrophotographic image forming apparatus. The toner cartridge including a container body for containing toner; a toner discharging port provided in the container body; a shutter 32a for opening and closing the toner discharging port; and a detection portion for detection of a position of the shutter by a shutter sensor 36 (i.e., optical sensor) provided in the image forming apparatus.

Fukuchi does not disclose that the shutter sensor is an optical sensor.

It would have been obvious to one of ordinary skill in the art at the time the invention was made that the shutter sensor of Fukuchi could be any known type of sensor, including an optical sensor, as long as the sensor is capable of detecting the opening and closing of the shutter as disclosed by Fukuchi because the type of sensor is not critical since the sensor must only be capable of detecting the opening and closing of the shutter.

### ***Allowable Subject Matter***

Claims 2, 3 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 6-11 are allowable over the prior art of record because the prior art of record fails to teach or suggest providing an image forming apparatus that includes an

interchange door openable and closeable for interchange of a toner supplying container; and an optical sensor provided on an inner surface of the interchange door for detecting a position of a shutter.

Claims 12-16 are allowable over the prior art of record because the prior art of record fails to teach or suggest providing an image forming apparatus that includes an interchange door openable and closeable for interchange of a toner supplying container; and an optical sensor provided on an inner surface of the interchange door to detect whether the toner supplying container is mounted.

#### ***Relevant Prior Art***

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yang discloses an image forming apparatus that includes a first sensor for detecting if a cover of the apparatus is being opened or not and a second sensor for detecting if a toner cartridge of the apparatus is moved or not.

Cho discloses a multi-function machine having a multifunctional cover.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Royer whose telephone number is (571) 272-

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2140. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur T. Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William J. Royer  
Primary Examiner  
Art Unit 2852

wjr  
February 3, 2006